

the gypsum board and to deboss decorative patterns into the board.

Excellent results have been achieved by this process, with 100% adhesion of the wood veneer to the gypsum outer paper as well as a very clean and concise pattern in the debossed veneer without tearing or bubbling. Specifically, when the softening agent which penetrates through the outer covering paper into the gypsum core is heated to a vapor with the heated press, the outer paper becomes elastic and the gypsum core becomes plastic. The vaporized softening agent thus promotes stretching of the face paper during the debossing of decorative patterns into the board. The vaporization of the elasticity-promoting softening agent inside the gypsum board permits decorative patterns to be impressed or debossed into the gypsum substructure without impairing the integrity of the board.

Similarly, the water applied to the wood veneer soaks through the wood to allow the wood to become elastic and thus promotes stretching during the debossing process, while the aluminum backing further prevents the wood from cracking or breaking. The stretching of the wood enables the wood veneer to be debossed with a very clean and concise pattern in the debossed veneer without tearing or bubbling.

The foregoing description is only illustrative of the principle of the present invention. It is to be understood that the present invention is not to be limited to the exact construction as illustrated and described herein. Accordingly, all expedient modifications which may be made within the scope and the spirit of the present invention are encompassed herein. For instance, while an aluminum backing is preferably for backing a wood veneer, other metal foil may be used if necessary.

I claim:

1. A board comprising a flat gypsum core having at least two flat opposed sides, an outer paper covering bonded to at least one of said two sides, a metal foil bonded to said outer paper covering and a wood veneer bonded to said metal foil, wherein decorative designs are debossed into the surface of the board, said board being formed by a process comprising the steps of:
  - providing a gypsum board having said outer paper covering bonded to said gypsum core at least on one side of said board;
  - applying a softening agent to said outer covering of said board to moisten said board;
  - applying a mixture of adhesive and said softening agent to one side of a wood veneer laminate which has said metal foil bonded thereto;
  - placing said one side of said wood veneer laminate with said metal foil over said moistened outer covering of said board;
  - moistening said wood veneer laminate to soften said wood veneer; and
  - simultaneously pressing a decorative pattern into said wood veneer laminate and said board by applying pressure and heat to the exposed outer surface of said wood veneer laminate,
- whereby said heat and pressure applied to the surface of the wood veneer laminate cause said wood veneer laminate to bond with said gypsum board, and simultaneously form decorative debossed patterns into said wood veneer laminate and into the gypsum board, said

heat causing the moistened wood veneer to become elastic and vaporizing said softening agent which penetrates through said outer covering and into said gypsum core to cause said outer covering to become elastic and said gypsum core to become plastic, wherein said metal foil minimizes breaking of the wood during said pressing step.

2. A board according to claim 1, wherein said metal foil is aluminum.

3. A board according to claim 1, wherein said wood veneer laminate and said gypsum board is pressed at a temperature of about 180°F for a period of 45 seconds.

4. A board according to claim 1, wherein said mixture comprises 70-80% adhesive and 20-30% softening agent.

5. A board according to claim 4, wherein said adhesive consists of poly-vinyl acetate catalyze.

6. A board according to claim 1, wherein said wood veneer laminate is provided with air venting means to release any trapped air between said veneer laminate and said outer covering during the pressing step.

7. A board according to claim 6, wherein said air venting means is cuts provided in said wood veneer laminate in sections.

8. A board according to claim 6, wherein said air venting means is at least one slit provided in said wood veneer laminate.

9. A board according to claim 6, wherein said air venting means is perforations provided in said wood veneer.

10. A board according to claim 1, wherein said softening agent comprises water mixed with propylene glycol or water mixed with denatured alcohol or plain water.

11. A laminated board having decorative design debossed into the surface of said board, comprising:

a gypsum material forming a core of said laminated board, the gypsum core having two opposed flat sides;

a paper layer coated on said two opposed flat sides of the core;

a wood veneer laminate bonded to said paper layer on one of said two sides;

decorative designs simultaneously debossed into said wood veneer laminate, through said paper, and into said gypsum core,

wherein said wood laminate comprises a wood veneer bonded to a metal foil, said metal foil preventing wood from cracking or breaking during debossment of said decorative design.

12. A laminated board according to claim 11, wherein said metal foil is aluminum.

13. A laminated board according to claim 13, wherein said wood veneer laminate is provided with air venting means to release any trapped air between said veneer laminate and said outer covering during debossing.

14. A laminated board according to claim 13, wherein said air venting means is cuts provided in said wood veneer laminate in sections.

15. A laminated board according to claim 13, wherein said air venting means is at least one slit provided in said wood veneer laminate.

16. A laminated board according to claim 13, wherein said air venting means is perforations provided in said wood veneer.